

**Municipality/Organization:** Town of West Bridgewater

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**EPA NPDES Permit Number:** MAR041172

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**MassDEP Transmittal Number:** W-041193

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**Annual Report Number**

**& Reporting Period:** No. 11 April 1, 2015 – March 31, 2016

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## **NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2016)**

### **Part I. General Information**

Contact Person: Leonard Graf

Title: Highway and Vehicle Maint. Supt.

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Telephone #: 1-508-894-1216

Email: LGraf@WBridgewater.com

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Mailing Address: Highway Department, 65 North Main Street, West Bridgewater, MA 02379

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#### Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: *D Gagne*

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Printed Name: David L. Gagne

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Title: Town Administrator

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Date: April 30, 2016

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## **Part II. Self-Assessment**

**The Town of West Bridgewater has completed the required self-assessment and has determined that our municipality's efforts to implement some of the BMPs required in the permit have required more time to implement than was originally thought. Highway & Vehicle Maintenance Supt. Leonard Graf is taking the lead on dealing with the current NPDES permit requirements and has been coordinating with Water Department Supt. Wayne Parks for updating the Town's mapping in GIS format for storm drainage systems throughout the Town. The Town's CWRMP committee continues to work with the Water Superintendent to identify and map additional information on GIS drawings.**

**In addition, the CWRMP committee continues to review the activities covered by the permit, to determine which are appropriate to be coordinated directly by the committee, vs. the ones that should be coordinated and/or implemented by paid Town staff such as the highway department. The CWRMP is continuing to coordinate its efforts with the Highway Superintendent and his department to develop clear lines of responsibilities. CWRMP has prepared a budget and requested funding to begin the stenciling of storm drains, forming a public education force, and other activities that can be reasonably expected to be performed by volunteers or in conjunction with the schools.**

**The Board of Selectmen and the Finance Committee have approved a budget pending Town Meeting's approval (june 13, 2016) to increase funding for the management and oversight of the new MS4 Permit regulations. Included is additional funds for an increase in hours for the Conservation agent specifically for time associated in managing the new regulations. Funding has also been approved, subject to Town Meeting approval, to hire additional staff help to assist the Conservation Agent.**

**In addition, two new By-Laws. "Stormwater Management" and "Illicit Discharge" (replaces existing Illicit Discharge By-Law) which incorporate the most up to date EPA regulations are being proposed at Town Meeting seeking approval**

**The provisions of the permit which the Town is currently not in compliance with are the following:**

**BMP #4 - Educate Students (this will be addressed as the stenciling program proceeds in May and June.**



**Part III. Summary of Minimum Control Measures**

**1. Public Education and Outreach**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 13</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 14</b>
1.	Enlist residents as S/W Educators	S/W Mgr.	Form Public Education force	The CWRMP committee began planning stages for program	Begin to recruit volunteer storm water educators.
Revised				Dedicated website for Stormwater created and live	
2.	Design and Distribute brochures	S/W Mgr.	Raise public awareness	Consider additional public notices through newspaper articles	Ongoing efforts to get the word out through the press.
Revised				Post Stormwater flyers on Facebook Page and distribute them at events sponsored by the Open Space and Recreation Committee (OS&RC) and the Conservation Commission.	Create more stormwater Flyers and continue posting on the Town Website and Facebook. In addition continue to distribute flyers at events sponsored by the OS&RC and Con Com.
3.	Stencil storm drains	Highway Department	Paint ID's on all catch basins	CWRMP developed program and requested obtained funds to begin storm water stencil program. Began in Spring of 2015	On going
Revised					
4.	Educate students	Task Force and Teachers	Introduce in Classrooms	CWRMP Chairman met with Principal and Superintendent multiple times to discuss implementation.	CWRMP Committee to meet with science teachers at the school to discuss working with them to educate the students.
Revised					Link dedicated website on school website
Revised					

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## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year -13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
5.	Form Technical Committee T/C	S/W Mgr.	Committee Provides technical assistance	Focus committee's attention on preparing for the requirements of the new NPDES permit while implementing the remainder of the parts of the current NPDES permit.	Continue to focus committee's attention on preparing for the requirements of the new NPDES permit while implementing the remainder of the parts of the current NPDES permit.
Revised					
6.	T/C Reviews general permit	T/C	Goals identified	On going NPDES permit review for compliance.	On going.
Revised					
7.	T/C drafts By-Laws	T/C	Town Meeting adopts by-laws	Completed	Committee to meet with Conservation Commission, ZBA, Planning Board, Building Inspector as appropriate to seek input for changes needed for Town Meeting adopted by-laws relating to enforcement of storm water management BMPs.
Revised					
8.	Residents assist with by-law enforcement	S/W Mgr.	Residents report violations	Residents report violations to Board of Health and Conservation Commission Agents and/or Highway Supt. Supt. works with Town agents to investigate and take action to stop the violation	Ongoing.
Revised					
9.	Conservation Erosion Control Policy	Conservation Agent	Accomplish more and consistent erosion control inspections	All commercial (which includes large residential development) projects are required to have a designated Erosion Control Supervisor who inspects the construction site and reports to the Conservation Commission	Continue the policy and require the inspectors to be certified Erosion Control Specialist
Revised					
Revised					

### 3. Illicit Discharge Detection and Elimination

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 13</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 14</b>
9.	Map outfalls and MS4	Highway Supt.	Map of MS4	Continued integrating storm drain information into Water Department's GIS program to more departments.	Initiate development of a training session to be used on DVD/CD to DPW employees. Ongoing
Revised					
10.	Train staff in outfall inspection	Highway Supt	Develop detection program	.	Continue ongoing training with employees
Revised				Purchased tablet and software to be used in the field for MS4 reporting to be in conjunction with the GIS mapping system	
11.	Technical Committee drafts illicit discharge bylaw	Highway Supt	Town adopts bylaw	Completed	Completed
Revised					
12.	Enforcement of bylaw	Highway Supt and Board of Selectmen	Discourage violations	Ongoing program every day. Complaints brought to ConCom, Board of Heath, Building Inspector and Highway Department.	Continue
Revised					
13.	Require construction as built plans for conservation filings of stormwater management systems	Conservation Agent	Establish accurate locations of newly created drainage structures and outfalls	Received as built plans of stormwater control systems in compliance with the regulations	Continue to implement and review the maintenance of stormwater management systems
Revised					
Revised					

#### 4. Construction Site Stormwater Runoff Control

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 13</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 14</b>
13.	Joint selection of erosion BMPs to be required for construction	Tech. Comm.	Con-Com. Assist w/drafting Erosion & Sediment Control By-Law	Work with ConCom By-Laws and Rules and Regulations which address erosion and sediment control to learn procedures to follow.	Ongoing.
Revised					
14.	Pl. Bd. Includes E&S BMPs in subdivision review	Technical Committee, Planning Bd.	BMPs required	Work with Planning Board and Conservation Commission to make sure BMPs are required	Look at updating BMP's as technology changes.
Revised					
15.	ZBA includes E&S BMPs in site plan review	Tech.Comm., ZBA	BMPs required	Completed.	Completed.
Revised					
16.	Regular reporting of erosion control management BMPs	Conservation Agent	Obtain quick response to conditions where erosion occurs	Received reports of erosion problems and what corrective measures were taken	Continue to monitor inspection reports and provide enforcement where corrective action was not taken
Revised					
Revised					
Revised					

### 5. Post-Construction Stormwater Management in New Development and Redevelopment

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 13</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 14</b>
16.	PIBd Meets with Tech.Comm to review goals of S/W plans	Pl.Bd., Tech Comm.	Identify changes in regs needed to comply	Reviewed all BMPs with Planning Board Chairman to incorporate into SPR process and on-going procedures to use during Site Plan Review process.	Ongoing.
Revised					
17.	Propose regulation changes as appropriate	Pl.Bd., Tech Comm, ZBA	Amend existing regulations	Completed .	Completed
Revised					
18.	Require BMPs in review process	Pl. Bd., ZBA	Land use boards require S/W management plans	Completed	Completed.
Revised					
19.	Require deed restrictions	Pl.Bd/. ZBA, Town Counsel, S/W Mgr.	Town can ensure long term maintenance	Continue to evaluate and monitor progress of Boards on projects where deed restrictions may be appropriate.	Continue to evaluate and monitor progress of Boards on projects where deed restrictions may be appropriate.
Revised					
20.	Establish on-going requirements for long term maintenance of stormwater mangement systems	Conservation Agent	Keep BMPs maintained and operable after the certificate of compliance has been issued by the Conservation Commission	Issued Certificate of Compliance documents with the on-going long term maintenance requirements and reporting.	Continue monitoring and requiring the reports and inspections. Department has requested increased funding for catch basins to be cleaned
Revised					
Revised					

## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 13</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 14</b>
20.	Clean Catch basins regularly	Highway Dept.	Prevent debris from entering MS4	In progress.	Continue program and evaluate its efficiency.
Revised					
21.	Sweep streets regularly	Highway Dept.	Prevent sand & debris from entering MS4	In progress.	Continue program.
Revised					
22.	Use E&S controls for road repairs	Highway Department	Prevent erosion into MS4	Filed a Notice of Intent process with the Conservation Commission for all road repairs and received an Order of Conditions to proceed	Utilize the Order of Conditions issued by the Conservation Commission for all road repairs.
Revised					
23.	Cover outside drains	Highway Dept.	Prevent leachate	Develop modifications to covers to facilitate maintenance.	Continue modifications to covers to facilitate maintenance.
Revised					
Revised					
Revised					

**7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 11</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 12</b>
24.	Does MS4 discharge into impaired water body?	Highway Supt.	Show outfalls of MS4 into impaired water bodies	Outfalls have been added to GIS system in the Water Department along with other mapping effects	Monitor outfalls and continue training
Revised					
25.	Identify whether pollutants are discharging into MS4	Highway Supt.	Identify source of pollutants	Respond to reported instances of suspected pollutant discharge when they arise.	Continue program
Revised					
26.	Ensure WLA met by S/W BMPs	Highway Supt.	Determine if add'l S/W BMPs needed	Work with peer engineering review with Planning Board and Zoning Board of Appeals for each new Site Plan Review.	Continue program
Revised					
27.	Eliminate pollutant discharges coming through MS4	Highway Supt.	Enforce illicit discharge by-law	Highway Supt works with Conservation Commission and Board of Health agents for investigation and enforcement.	Ongoing.
Revised					
Revised					
Revised					

**7a. Additions**


**7b. WLA Assessment**

**Part IV. Summary of Information Collected and Analyzed**

The Town is currently involved with the Southeastern Mass Storm water Collaborative in producing a training session for DPW workers and volunteers on illicit discharge detection and elimination, municipal housekeeping and pollution prevention

**Part V. Program Outputs & Accomplishments (OPTIONAL)**

(Since beginning of permit coverage unless specified otherwise by a \*\*, which indicates response is for period covering April 1, 2014 through March 31, 2015)

**Programmatic**

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Yes – Highway Supt.
Annual program budget/expenditures could estimate a percent of annual DPW Budget	(\$)	Not estimated
Total program expenditures since beginning of permit coverage	(\$)	Not estimated
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund
Grant through Southeastern Mass Storm Water Collaborative	(\$)	\$5000

**Education, Involvement, and Training**

Estimated number of property owners reached by education program(s)	(# or %)	2,300 households
Stormwater management committee established	(y/n)	Yes
Stream teams established or supported	(# or y/n)	no
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n, or mi.)	No
Shoreline cleaned since beginning of permit coverage	(mi.)	N/A
Household Hazardous Waste Collection Days :		
▪ days sponsored **	(#)	0
▪ community participation **	(# or %)	0
Calls received pertaining to collections are given names of collection agencies that accept material year round		

<ul style="list-style-type: none"> <li>material collected **</li> </ul>	(tons or gal.) 28car batteries; 81 tires; 2052 lbs. alkaline batteries; 10 lbs NiCad batteries 34 lb Lithium batteries 2363 gallons waste oil and 2532 fluorescent lamps.	
School curricula implemented	(y/n)	No -ongoing planning

**Legal/Regulatory**

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
<b>Regulatory Mechanism Status (indicate with "X")</b>					
<ul style="list-style-type: none"> <li>Illicit Discharge Detection &amp; Elimination</li> </ul>					X
<ul style="list-style-type: none"> <li>Erosion &amp; Sediment Control</li> </ul>	X				X
<ul style="list-style-type: none"> <li>Post-Development Stormwater Management</li> </ul>	X				X
<b>Accompanying Regulation Status (indicate with "X")</b>					
<ul style="list-style-type: none"> <li>Illicit Discharge Detection &amp; Elimination</li> </ul>					X
<ul style="list-style-type: none"> <li>Erosion &amp; Sediment Control</li> </ul>					X
<ul style="list-style-type: none"> <li>Post-Development Stormwater Management</li> </ul>					X

## Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)100%	100
Estimated or actual number of outfalls	(#)	36
System-Wide mapping complete (complete storm sewer infrastructure)	(%)90%	90
Mapping method(s)		
▪ Paper/Mylar	(%)	60-70%
▪ CADD	(%)	0
▪ GIS	(%)90%	90
Outfalls inspected/screened **	(# or %)	0
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	100%
Illicit discharges identified **	(#)0	
Illicit discharges identified (Since beginning of permit coverage)	(#)	6
Illicit connections removed **	(#) and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#) and (est. gpd)	5
% of population on sewer	(%)	4%
% of population on septic systems	(%)	96%

## Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	3
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	100%
Tickets/Stop work orders issued **	(# or %)	1
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	1

## Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100%
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	Yes - 8
Low-impact development (LID) practices permitted and encouraged	(y/n)	Yes

## Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	1 time/year
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1 time/year
Qty of structures cleaned **	(#)	200
Qty. of storm drain cleaned **	(%, LF or mi.)	700 feet
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	26 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	All being hauled away by contractor.

<b>Basin Cleaning Costs</b>		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$ 5533.50
• Hourly or per basin contract rate **	(\$/hr or \$/basin)	\$ 26.35
• Disposal cost**	(\$)	Included
<b>Cleaning Equipment</b>		
• Clam shell truck(s) owned/leased	(#)	No
• Vacuum truck(s) owned/leased	(#)	No
• Vacuum trucks specified in contracts	(y/n)	No
• % Structures cleaned with clam shells **	(%)	100%
• % Structures cleaned with vector **	(%)	0 %

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	2 -3 times/yr
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	2-3 times/yr
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	20 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$7,000
• Hourly or lane mile contract rate **	(\$/hr or ln mi.)	NA
• Disposal cost**	(\$)	\$3,500
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1 owned
• Vacuum street sweepers owned/leased	(#)	No
• Vacuum street sweepers specified in contracts	(y/n)	NA
• % Roads swept with rotary brush sweepers **	(%)	100%
• % Roads swept with vacuum sweepers **	(%)	0%

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	2% increase since beginning of permit.
▪ Herbicides	(lbs. or %)	Use 2 quarts of concentrated round-up a year

▪ Pesticides	(lbs or %)	Uses 10 -- 18oz. cans of Hornet & Wasp Spray each year.
Integrated Pest Management (IPM) Practices Implemented – Program in place for Schools and Town	(y/n)	Yes

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used **  (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	90%  10%
Pre-wetting techniques utilized **	(y/n or %)	Yes
Manual control spreaders used **	(y/n or %)	Yes
Zero-velocity spreaders used **	(y/n or %)	No
Estimated net reduction or increase in typical year salt/chemical application rate	(lbs./ln mi. or %)	None
Estimated net reduction or increase in typical year sand application rate **	(lbs./ln mi. or %)	None used
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100 %
Storage shed(s) in design or under construction	(y/n or #)	New - 2013
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Yes

### Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	(# or y/n)	None
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	(# or y/n)	None
• Treatment units induce infiltration within 500-feet of a wellhead protection area	(# or y/n)	None Known

